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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/678,728 | 10/04/2000 | Yat-Tung Lam | MP0042 | 6746 |
| 23624 | 7590 | 05/26/2005 | EXAMINER | |
| MARVELL SEMICONDUCTOR, INC. INTELLECTUAL PROPERTY DEPARTMENT 700 FIRST AVENUE, MS# 509 SUNNYVALE, CA 94089 | | | MAI, TAN V | |
| | | ART UNIT | PAPER NUMBER | 2193 |

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | |
|------------------------|---------------------|--|
| Application No. | Applicant(s) | |
| 09/678,728 | LAM, YAT-TUNG | |
| Examiner | Art Unit | |
| Tan V. Mai | 2193 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 04 March 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 3-6 is/are allowed.
- 6) Claim(s) 1,2 and 7-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

Art Unit: 2193

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-2 and 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lish.

As per independent claim 1, Lish discloses, e.g., see Figs. 4A-4B, the invention substantially as claimed, including: an input **a Xin, FIR filter** [comprising a plurality of filter stages "C1-C4"], and a plurality of **delays Z**. It is noted that Lish do not specifically detail the claimed "**delay ... to skip** filtering a portion of the input signal"; however, the "switching matrix" S1-S4 are capable of providing the equivalent function of the claimed "**delay ... to skip**". It would have been obvious to a person having ordinary skill in the art at the time the invention was made to design the claimed invention according to Lish's teachings because the device is an FIR filter having a plurality of filter stages as claimed.

As per dependent claim 2, the claim adds "wherein the delay of said delay is adjustable". The switch is capable of providing the equivalent function because the switch is in THREE positions.

As per claims 7-11, 13, due to the similarity of claims 7-11 to claim 2, they are rejected under a similar rationale.

As per independent claims 12 and 17-18, due to the similarity of claims 12 and 17-18 to claim 1, they are rejected under a similar rationale.

As per independent claims 14-15, the claim add "first / second plurality of LMS engines" features. Lish's Figs. 4A-4B illustrate the circuit of novel FIR adaptive filter used in the ghost cancellation circuits.

As per dependent claim 16, the claim adds the detail of said first plurality of LMS engines. The feature is obvious to a person having ordinary skill in the art.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited reference is art of interest.

4. Due to the new grounds of rejection cited above, that the office action is NON-FINAL.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (571) 272-3726. The examiner can normally be reached on Mon-Wed and Fri. from 9:30am to 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is:

Official (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.


Tan V. Mai
Primary Examiner